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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/822,594

04/12/2004

Karl Hakan Torbjorn Gardenfors

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2867

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7590

03/09/2005

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EXAMINER

ZIMMERMAN, BRIAN A

ART UNIT

PAPER NUMBER

2635

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/822,594

Applicant(s)

GARDENFORS ET AL.

Examiner

Brian A Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-126 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-126 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/21/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 23-33,35,36,38-40,42-48,51,52,54-57,59-65,68,69,71-73,75-86,88-95,97,98,100,102,104-111,113,114,116-124,126 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,2,6-8,12,14-16,18 of U.S. Patent No. 6477148.

Claims 23,24,26-32,35,36,38-40,42-49,51,52,54-65,68,69,71-95,97,98,100-111,113,114,116-126 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,2,5-14,16,17 of U.S. Patent No. 6633550.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations in the pending claims are set forth in the broader patented claims. The narrower claims in this application are obvious variations of the patented claims. The claims correspond according to the following table.

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Pending Claims 10/822594	US Patent 6477148
23,24,31,35,36,38,39,47,51,52,54,55,64,68,69,71-73,83-85,97,98,100,113,114,116,126	1
26,42,59,75,88,104,118	2
27,43,57,60,76,89,102,105,119	7
28,44,61,77,90,106,120,123	6
29,45,62,78,91,107	15
30,46,63,79,92,108,121	16
40,86	12
48,56,65,81,94,110,124	14
80,93,109,122	8
82,95,111	18
117	10

Pending Claims 10/822594	US Patent 6633550
23,35,36,38,39,51,52,54,55,68,69,71,72,73,83-85,97,98,116,126	1
24-33,42-49,56-65,74-82,87-95,102-111,118-124	4-13
40,86	15
100,113,114	16
101,125	17
117	2

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- Claims 55-71,85-125 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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Regarding the limitation present in each of the independent claims listed above, namely "...without components external...", support for this negative limitation could not be found in the specification as originally filed. While support can be found for having the function performed on the IC chip, there is no support in the specification that states that element off the IC chip cannot be use additionally.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 110 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 110 depends on claim 100, which includes frequency hopping. It is unclear whether the frequency hopping means in claim 110 is the same as the one referenced in claim 100 or if there is a second frequency hopping circuit being described.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 55-58,60-71,116-126 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okanobu (GB 2296610), the Communication Handbook and Saito (US 5734970).

Okanobu shows a radio on a single IC chip. Okanobu shows an antenna section for transmitting and receiving a plurality of HF signals and means for transmitting and receiving the HF signals, figures 1,2 page 1 lines 6-19. Okanobu shows a down conversion section coupled to the antenna for down converting a HF signal to a low IF signal, page 1 line 20-page 2 line 6. The particular IF chosen is well within the level of skill of an artisan. Okanobu shows bandpass filters 13,23 coupled to the down conversion section, page 4 lines 16-22. Okanobu shows a discriminator coupled to the bandpass filter, page 7 lines 9-14. Okanobu shows an up conversion section coupled to the antenna for up converting a second HF signal, the up conversion section includes a portion of the down conversion section, elements 30,311,431, page 8 lines 1-13. Okanobu shows a shaping filter coupled to the input of the up conversion section, page 8 lines 1-3. Okanobu shows the use of variable controlled oscillator.

Okanobu differs from the claimed invention in that the claims use a single step heterodyne section, and time division mode. It is noted that Okanobu uses a super heterodyne section. The examiner takes official notice that the use of heterodyne converters and super heterodyne converters are verily well known equivalent conversion elements in communication devices, that perform the

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same functions, differing only in the clarity of the output of the received data slightly.

Okanobu shows the implementation of an image rejection device. The image rejection device of Okanobu includes a first mixer for mixing the receive signal with a LO (local oscillator) and a second mixer for mixing the receive signal with a ninety degree phase shifted LO and adding these mixer outputs.

See last para. of page 2.

The Communication Handbook is evidence that time division multiplexing as well as frequency division multiplexing are common methods of sharing bandwidth in data communication systems. The Communication Handbook also suggests that frequency hopping is common in the art. The Communication handbook also shows that GFSK is common in the art. The Communication Handbook also suggests that ARQ (automatic retransmission request) is a common method of providing error correction. Additionally, the Communication Handbook suggests that continuous variable slope delta modulation is a very common method of efficiently transmitting digital voice. Additionally the manner of disclosure by the applicant, regarding GFSK, bound wire inductor resonators, and CMOS Gyrator Filters amounts to admission that such are well known in the art. See page 7 and 19 of the present specification.

Additionally, Okanobu does not expressly show all the claimed elements on a single IC. Okanobu does disclose all but the filter being on the same IC. It has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art.

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Howard v. Detroit Stove Works, 150 U.S. 164 (1893). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have integrated the elements of Okanobu onto a single IC in order to save space.

In analogous art, Saito shows a transceiver which uses a voltage controlled oscillator 71 to perform transmit functions. This VCO is connected to the antenna section (S19), using a power amplifier 17, and to the filter 74 to generate and transmit high frequency transmit signals in response to the data signal 11. Using a Voltage controlled oscillator provides the advantage that a transceiver need not have two separate oscillators. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the one oscillator principals of Saito in the above discussed transceiver to reduce the number of oscillators in the above system.

It is noted that the particular IF chosen is well within the level of skill of an artisan. Secondly, as the claims are broad in scope, it can be seen that the down channel (254M) of Okanobu is "about" 3MHz.

Regarding claims 55, and it's depending claims, it is the examiner's position that since the IC limitation exists only in the preamble of the claim, it is only given weight as a use limitation. The limitation does not breath life or meaning into the claim. See the Board of Appeal decision in the parent application (08/803392).

Regarding the limitation of a single IC in claims 116-126, to be entitled to weight in method claims, the recited structure limitations therein must affect the method in a manipulative sense, and not to amount to the mere claiming of a use

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of a particular structure. Ex parte Pfeiffer, 1962 C.D. 408 (1961). Here they do not. Since it is pointed out above how the references show claimed functions, it follows that the rejection of the method claims applies.

5. Claim 59 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okanobu (GB 2296610), the Communication Handbook and Saito (US 5734970) as applied to claim 55 above, and further in view of Smith (US 5323332).

The above combination fails to suggest the use of an image rejection device. In an analogous art, Smith shows that the use of a image rejection device when used in conjunction with a single heterodyne reduces interference. See abstract. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized an image rejection device with a single heterodyne in the above modified system in order to reduce interference do to adjacent channels (as suggested by Smith).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian A Zimmerman whose telephone number is 571-272-3059. The examiner can normally be reached on Off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Horabik can be reached on 571-272-3068. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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